

Abstract

Systems and methods for creating, modifying, interacting with and playing music are provided, particularly systems and methods employing a top-down process, where the user is provided with a musical composition that may be modified and interacted with and played and/or stored (for later play), and particularly in a form that may be employed in one or a plurality of music generation music that provide on-hold music to callers that are put on-hold in a telephony environment. The system preferably is provided in a handheld form factor, and a graphical display is provided to display status information, graphical representations of musical lanes or components which preferably vary in shape as musical parameters and the like are changed for particular instruments or musical components such as a microphone input or audio samples. An interactive auto-composition process preferably is utilized that employs musical rules and preferably a pseudo random number generator, which may also incorporate randomness introduced by timing of user input or the like, the user may then quickly begin creating desirable music in accordance with one or a variety of musical styles, with the user modifying the auto-composed (or previously created) musical composition, either for a real time performance and/or for storing and subsequent playback. The graphic information preferably is customizable by a user, such as by way of a companion software program, which preferably runs on a PC and is coupled to the system via an interface such as a USB port. A modified MIDI representation of music is employed, preferably, for example, in which musical rule information is embedded in MIDI pitch data, and in which sound samples may be synchronized with MIDI events in a desirable and more optimum manner. The system architecture preferably includes a microprocessor for controlling the overall system operation. A synthesizer/DSP preferably is provided in order to generate audio streams. Non-volatile memory preferably is provided for storing sound banks. Preferably removable non-volatile storage/memory is provided to store configuration files, song lists and samples, and optionally sound bank optimization or sound bank data. A codec preferably is provided for receiving microphone input and for providing audio output. A radio tuner preferably is provided so that output from the radio tuner may be mixed, for example, with auto-composed songs created by the system, which preferably includes a virtual radio mode of operation.